WYCKOFF: Something must have happened to Mr. Zapruder when he was -- something must have startled him when he was holding his camera. He had a -- a camera very much like this model right here, which is an 8 mm camera. And as he held it up to his eye, focusing -- concentrating on the President, something startled him - and he jumped a little bit with the camera.

[illegible] Not nearly that much?

[illegible] Not anything like that at all. Just a very subtle [illegible] but that was just enough to cause a blur of these [illegible] holes in here. And also a blur of highlights on the [illegible]

[illegible] All right, now, you see that very clearly in frame [illegible] and that frame does look distorted - and you can't see [illegible] white holes in the wall across the street clearly at all. [illegible] how many times does that occur in this ten second stretch [illegible] film?

[illegible]: Now, that -- that occurs several times, as we've [illegible] up here on the -- on this film on the wall. It [illegible] at frame 190, it occurs again at frame 227. Frame [illegible] the next evidence that I had of Mr. Zapruder moving [illegible] camera. And it occurs at frame 318.

Now, this is interesting, because we all know that at frame [illegible] the President received the fatal shot. We have a natural [illegible] time - that -- that he heard the sound at about the [illegible] that the -- that something happened to President [illegible] when he was fatally wounded here. We can apply this [illegible] ion, of about four or five frames, [illegible] where I noted [illegible]

Mr. Dulles. That is what puzzles me.

Senator Cooper. Would you identify the frame in which Governor Connally started turning to the right?

Mr. Shaneyfelt. I might say that as--in the motion picture--as the car comes out from behind the signboard, the Governor is turned slightly to his right in this manner. This would be in the first frame, in frame 222, he is turned just slightly to his right, and from there on he turns almost square, straight on with the car momentarily, and there is a jerking motion there at one point in the film about there, at which time he starts to turn this way and continues to turn.

Mr. Dulles. Jerky motion in Connally in the film.

Mr. Shaneyfelt. There is--it may be merely where he stopped turning and started turning this way. It is hard to analyze.

Mr. Dulles. What I wanted to get at--whether it was Connally who made the jerky motion or there was something in the film that was jerky. You can't tell.

Mr. Shaneyfelt. You can't tell.

Mr. McCloy. Certainly the film is jerky at that point. I mean there is a big blur (4H155).

Other possible explanations of this jerkiness exist. If Shaneyfelt could not tell the cause, we soon may, for we, too, have examined that film without trying to prove Oswald was the assassin.

Mr. Specter. Was there a still photograph known as AP photograph, which was taken at the time of the assassina- [illegible] studied by you and

on the sixth floor. [illegible] shots were fired, most probably

ANNOUNCER: This CBS NEWS INQUIRY, "The Warren Report," will continue in a moment.

(ANNOUNCEMENT)

ANNOUNCER: A CBS NEWS INQUIRY, "The Warren Report," continues. Here again is Walter Cronkite.

CRONKITE: We come now to our fourth question for tonight: Was Oswald's rifle fixed from the building? To answer this one the Commission placed major reliance on physical evi[illegible] found within the building. Three shells, later identif[illegible] as fired from Oswald's rifle, were found forty-two minutes after the shots. Ten minutes later a rifle was discovered.

RATHER: The rifle was found on the sixth fl[illegible] the stairway between some cartons by [illegible] Weitzman. And [illegible] plagued the Warren [illegible] ide[illegible]

bullets. It is, of course, not necessary to use bullets to practice operating the bolt. And it is equally true that practice is not the only procedure that will mark a shell. Firing, for example, does exactly the same thing.

A footnote at this point refers to something totally unrelated, four photographs of Oswald following his arrest. But there is a letter from J. Edgar Hoover on the bullets buried in the very last of the 26 volumes (26H449-50). Of these empty cases, Hoover reported one had marks indicating it had been loaded and extracted at least three times and "three sets of marks on the base of this cartridge case which were not found (on the others) or any of the numerous tests obtained" from the rifle. Of a second casing, it had been "loaded into and extracted from a weapon at least twice", and there are two marks connecting this casing with the rifle, Hoover says, but it is not possible to determine whether these were made on the same or different occasions. The inference is clear: It could have been just one entry into this weapon. And the same was true of the third casing.

And even with the live bullet, there were additional marks which "were not identified with" the rifle!

Is it not surprising that the Report completely fails to indicate that by the best science available all three empty cases and the live bullet were connected with another rifle? Nor is this surprise lessened by the failure of the Report to say whether the empty shells had been fired from another rifle. Could they have been reloaded following fire from another rifle and marked by merely being placed in the Mannlicher-Carcano, or vice versa?

Then there is the question of how the casings were loaded. Bullets of an entirely different character in this casing were readily available in Dallas. There is evidence only that Oswald did not buy any. This is proved in another of the Commission's burials, like the others reproduced in facsimile, in greatly reduced size. It is Exhibit 2694, an unsigned, undated, unidentified document bearing no letterhead. The tables of contents of these volumes are usually less informative than they might easily be. In this case, even less than usual is revealed. The listing is "Report of investigation of possible target practice of Lee Harvey Oswald in Dallas, Tex., area (CD778, pp.5-23)" (26H58-68).

What relates to the investigation of target practice reports its illegality, and no evidence that Oswald ever did practice target shooting. But during the course of this investigation, presumably by the FBI, the sources of ammunition of this type in the Dallas area are generally indicated and some specific investigations reported. The rifle, according to one dealer, had been imported by "boat loads" and had a wholesale value of but $3.00. At two specified sources, this type of cartridge loaded with an entirely different type of bullet, hunting or soft-nosed bullets, was found. At one of these, "On March 26, 1964, two boxes, 20 rounds each, of 6.5 M/M Mannlicher-Carcano, Western Cartridge Company, ammunition were obtained for forwarding to the Laboratory of the Federal Bureau of Investigation. One box loaded with a hunting load (soft nose) was obtained from John Thomas Mason, and the other, which was a military load, was obtained from John H. Brinegar" (26H64).

The other source identified the Crescent Firearms Company as the

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Paines on at least one [illegible]
unprotected. During the [illegible]
Paines drove off while the

a point upon which the critics have siezed. Could Oswald have fired three shots in 5.6 seconds? Well, then new evidence made its appearance.

It was at first called to our attention by a distinguished physicist, Dr. Luis Alvarez, of the University of California at Berkeley.

BILL STOUT: What was it that made you interested enough to dip into the Warren Report to begin analyzing the photos of that day?

ALVAREZ: Well, I think it was probably that I had lunch every day with a bunch of my graduate students who were keenly interested in the controversy that was going on at the time. For a while I couldn't get very interested in it. But then when LIFE Magazine republished the frames from the Zapruder movie, I spent an evening looking at them - and I found something that excited my interest.

[illegible] to call this is particularly suspect. In his testimony only the slightest attention was paid to what he saw and it was even then not properly compared with his film record.

The middle of the three large road signs on the north side of Elm Street was between Zapruder and the President for about 20 frames, from about 205 to 225. Because of the downward grade to the underpass, at the beginning of the sequence, only part of the President's head is still visible over the top of this sign. The Commission's entire case is predicated upon the assumption that the first shot could not have been fired prior to frame 210, for that is the portion of the film in which, even on a still day, the President first became a clear shot from the sixth-floor window.

Zapruder was explaining how he took his pictures. "I was shooting through a telephoto lens ... and as it (the Presidential car) reached about - I imagine it was around here - I heard the first shot and I saw the President lean over and grab himself ..." (7H571). Lawyers know very well that such words as "here" in testimony relating to a location reflect nothing on the printed page. When they want the testimony clear, they ask the witness to identify the spot meant by "here". Zapruder was not asked to explain where "here" was. But the startling meaning of Zapruder's testimony is this: He saw the first shot hit the President! He described the President's reaction to it. Had the President been obscured by the sign, Zapruder could have seen none of this. Therefore, the President was hit prior to frame 210, prior to frame 205, the last one that shows the top of his head, and the exact point can probably be reconstructed from another unique quality of the Zapruder footage the Commission saw fit to ignore entirely.

The first 80 pages of Volume 18 are devoted to clips from this film, printed two to a page. These suffer from the reduction in clarity due to the printing process. They had a built-in reduction of distinction because they are printed from black-and-white 35-mm. slides made from 8-mm. color film. Zapruder himself pointed out this well known fact to the Commission. Nonetheless, they are almost all pretty clear, although detail has suffered from the extra steps in the processing. Beginning with frame 190, this film suddenly becomes fuzzy. Nothing had changed - the exposure was the same, the sun had not gone behind the clouds and the camera had kept clicking away. As any amateur photographer knows, this clearly means that the change was in Zapruder. He was no longer holding the camera as still. The slight motion imparted to the camera by his emotions at what he saw seems to be the only reasonable explanation for this fuzziness in the film to which the Commission was so

[illegible] the entire world, had taken it. There never was and can be no doubt of this. One possible explanation of the word "purportedly" is in the incompleteness of the photograph. It is one of a half-dozen always barbered versions in the record. Because the alteration of the photograph is at no point acknowledged, who doctored it is also not known. Among the possibilities is the photo lab. That might mean Shaneyfelt himself. But the photographs he produced could have been altered subsequently.

"After one of the shots" is an intriguing phrase. If Shaneyfelt meant only one shot had been fired, he was also saying, according to the careful limitations imposed by the Report's conclusion, that both men had been wounded before Frame 255 and that the shot that missed had not been fired by then. This allowed but 58 frames for the firing of two shots, barely the absolute mathematical minimum for the most expert and, from the performance of the Commission's own experts, beyond their capability, too (WHITEWASH 26).

> Mr. Specter. What motion pictures, if any, were taken during the reenactment?
>
> Mr. Shaneyfelt. During the reenactment the black-and-white photographs were made from Zapruder's position with a Speedgraphic camera and we also took motion pictures with Mr. Zapruder's camera from Zapruder's position with the car in the fixed locations as they were established with the car just stationary in those locations.
>
> After establishing all those points and making these film records of it, we then had the car proceed along that Elm Street route at approximately 11 miles per hour, and filmed it with Mr. Zapruder's camera loaded with color film from Mr. Zapruder's position and simultaneously photographed it with Mr. Nix's camera from Mrs. Muchmore's position, and this was done twice (5H162).

> Mr. Shaneyfelt. ... I found, in examining the film, that this is a shorter span of time than in the actual film. It is a span on the reenactment of about three and a half seconds between 222 and 313. The second frame stained is 313 but since it is running at a faster speed I have also stained a spot that represents 5 seconds which is what the time lapse was between frame 222 and frame 313 in the actual assassination films (5H176).

This cannot be passed over as blithely as Specter and those Commission members permitted. First, Shaneyfelt testified that his filmed reconstruction disagreed with the Zapruder film. This could have been caused by the Zapruder camera operating at a different speed than Shaneyfelt said, 18.3 frames per second (5H153), when Zapruder used it; by its going more rapidly when Shaneyfelt used it, or by other lack of faithfulness in the reenactment. An error of 30 percent cannot simply be ignored.

The entire case is absolutely and finally destroyed if the real time required to film Frames 222 through 313 required less than five seconds. Anything even close to 3.5 seconds requires an autopsy for the Report, for the minimum reloading time alone is more than that, or 4.6 seconds.

Specter's monumental indifference to this flaw, minute in seconds but astronomical in significance, is unfortunately characteristic of the entire Report and the staff work that went into it. One of two things is here inevitable: either the FBI's reconstruction was phony or the account of the assassination is false. Either is fatal to the Report.

Here the total and consistent failure of any of the Commission

staff or the FBI to meet the minimum legal requirements of testimony and evidence, a proper identification of the camera and its characteristics, assumes significance. We have already seen in the chapter, "Can Pictures Lie?" how Liebeler required Zapruder to bring nothing with him, did not ask him to identify his camera, his film or the lens or lenses used. Liebeler was consistent. He sought this knowledge of none of his photographic witnesses.

Specter likewise sought none of this information from Shaneyfelt, nor did Shaneyfelt volunteer it.

There is an explanation of this 30 percent difference that is so transparent every amateur movie photographer will understand it. Movie cameras have different speeds that are so easily changed they are sometimes shifted by accident. There are variations from manufacturer to manufacturer and model to model, but generally speaking, speeds are normal, usually 16 frames per second, or slow or fast motion.

This explanation should never have escaped the FBI's photographic expert. The possibility of this having happened should certainly have been presented to the Commission. Likewise, Specter should certainly have sought an explanation for an error of 30 percent in a reenactment that had to be the most exact in United States history for it to be depended upon. The Commission did depend entirely upon it.

Had this been my camera, the difference between the Zapruder film and the reenactment would almost certainly be accounted for by the assumption that the camera was filming at the wrong speed, or at 12 or 24 frames per second. Inquiry indicates this is also true of most cameras of the make of Zapruder's, Bell & Howell.

When the Zapruder film is examined in any version, the first impression is like looking at an ancient movie: It is going too fast. When I first studied the Zapruder film, this impression was so pronounced I asked the projectionist if the film were moving too fast. He assured me the projection speed was normal.

The simplest explanation for the impermissible difference of 30 percent is exposing the film at 24 frames per second in the original and at 18 frames per second in the reenactment and then projecting both at the same speed.

The simplest explanation of the failure of both counsel and witness to address what is so obvious is that it proved the impossibility of Oswald's having been the lone assassin - beyond the remotest possibility of any question.

> Mr. McCloy. First is the original Zapruder.
>
> Mr. Shaneyfelt. Original Zapruder. This is not the original. This is the first copy.
>
> (Film)
>
> Mr. Specter. Will you state for the record what film we just saw?
>
> Mr. Shaneyfelt. This film we just viewed is a copy made directly from the original Zapruder film of the actual assassination (5H177).

Less subtly phrased, this is a first copy, one made in Dallas the day of the assassination. It is <u>not</u> the Commission's official copy, the copy of record in the official archive of the President's assassination. That copy is further removed from the original, is therefore less distinct, and has other undesirable attributes that we shall soon be discussing.

> Mr. McCloy. Did Nix, Muchmore get a second shot of the head shot?
>
> Mr. Shaneyfelt. Mrs. Muchmore got the head shot and Mr. Nix got the head shot.

Confusion continued at Bethesda, as it had reigned at Parkland. F.B.I. agents submitted a report, later disclosed in Edward J. Epstein's book, "Inquest," which said they had heard one pathologist state that he had found a wound in the President's back, and could not find an exit.

The Warren Report version was explicit, that there was no wound in the back, but one in the neck. However, details of these published sketches tended to indicate that there was a wound below what could be described as the neck.

The photographs and X-rays which might clear up the issue were in possession of the Kennedy family, and only officially turned over to the Archives on October 31st, 1966 - with the provision that they not be made public for five years. Now, there the matter has rested until now. But Captain Humes, the Senior Pathologist at the autopsy, has since gone to the Archives and re-examined the X-rays and photographs. His conclusions we will hear later in an exclusive interview, the only one he's granted since that fateful night.

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Why there were the telephone calls from the Naval Hospital to Dallas?

And, above all, why the photographs and X-rays and the spectrographic analysis are not only not in the twenty-six volumes appended to the Report, but are not even exhibits in the Commission's record?

Are these really questions?

Is there, in fact, now any basic question other than who the assassins are?

And have we anything less than the most odious event in our national history?

Excerpts from the FBI report

I. THE ASSASSINATION

President John Fitzgerald Kennedy was assassinated in Dallas, Texas, at approximately 12:29 p.m. (CST) on November 22, 1963. At the time, the President was en route from Love Field to the Trade Mart in Dallas to address a luncheon sponsored by several civic groups. Among those in the motorcade with the President were

...

Street (Exhibit 1), three shots rang out. Two bullets struck President Kennedy, and one wounded Governor Connally. The President, who slumped forward in the car, was rushed to Parkland

Immediately after President Kennedy and Governor Connally were admitted to Parkland Memorial Hospital, a bullet was found on one of the stretchers. Medical examination of the President's body revealed that one of the bullets had entered just below his shoulder to the right of the spinal column at an angle of 45 to 60 degrees downward, that there was no point of exit, and that the bullet was not in the body. An examination of this bullet by the FBI Laboratory determined that it had been fired from the rifle owned by Oswald. (Exhibit 23)